CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

UNION PACIFIC TAYLOR YARD

Active Yard

San Fernando Road at Interstate 110, Glendale CA

PUBLIC COMMENT SOUGHT ON REMOVAL ACTION

Fact Sheet #12 **October 1999**

Introduction

*Words in **bold** may be found in the Glossary at the end of this Fact Sheet.*

The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) is requesting comments from the public on a proposal to clean up hazardous chemicals from soil on the Active Yard at Taylor Yard, in Los Angeles, California. The documents that describe this **removal action** are called an Engineering Evaluation/Cost Analysis (EE/CA) and a Removal Action Workplan (RAW).

Taylor Yard is located on San Fernando Road between the Glendale Freeway (Route 2) and the Harbor Freeway (Route 110) (Figure 1). The 243-acre Taylor Yard site (Site) is divided into two areas: 1) the 174-acre Sale Parcel, formerly used mainly to classify and hook up rail cars, and 2) the 69-acre Active Yard, so named because it continues to be used for locomotive service and maintenance. These areas have been contaminated with **petroleum hydrocarbons**, **organic solvents** and **metals**. The Sale Parcel soil has been cleaned. The location of the Active Yard is shown on Figure 1.

The Site is owned by Union Pacific Railroad (UPRR). In 1997 UPRR combined with the former owner, Southern Pacific Transportation Company. UPRR is responsible for the Site cleanup.

Copies of the EE/CA study and RAW report and other related project documents are located in the information repositories listed at the end of this Fact Sheet.

Public Comment Period
October 18 – November 17, 1999

Comments must be postmarked by November 17, 1999
Department of Toxic Substances Control
1011 North Grandview Avenue
Glendale, CA 91201
Attn: Dr. Gabriel Farkas

Previous Removal Actions on the Active Yard

Several types of activities have been performed on the Active Yard to remove contaminated soil. Spills have been cleaned up by using absorbent blankets or pumps to collect the liquid, or by excavating the contaminated soil.

In 1985 oil-stained **ballast** and the underlying soils in the southwest portion of the Active Yard were excavated to a depth of 5 to 8 feet below ground surface. The excavated areas were filled in with clean soil, and a Pollution Control System (PCS) was installed. The PCS collects liquids that spill onto the ground surface and routes them to the **wastewater** treatment plant. All liquids in the wastewater treatment plant are treated until they are acceptable for release to the City of Los Angeles sewer system. UPRR has a permit from the City of Los Angeles Department of Public Works, which allows the treated wastewater to be released to the city sewer system.

Between 1987 and 1994, two wastewater treatment ponds were decommissioned because there was evidence that they were leaking wastewater to the underlying soils. The ponds were used to store wastewater prior to its treatment in the wastewater treatment plant. The ponds were removed, and the contaminated soils were excavated. The excavation was filled in with clean soil.

In 1988, 17 tanks that contained, or formerly contained, fuel, solvents or other chemicals were removed from the Active Yard. If there was any evidence of contaminated soil associated with these tanks, the soil was excavated.

Previous Investigations on the Active Yard

Three soil investigations have been performed on the Active Yard. In 1995, a soil vapor survey was performed across the entire Active Yard. The investigation included collecting soil vapor samples at different depths

below the ground surface. Relatively high concentrations of **perchloroethylene (PCE), trichloroethylene (TCE), 1,1-dichloroethene (1,1-DCE), 1,1-dichloroethane (1,1-DCA), cis 1,2 dichloroethene (cis 1,2 DCE), chloroethane and vinyl chloride** were detected in soil vapor in limited areas of the Active Yard.

In 1997-1999, two soil investigations were performed in those areas of the Active Yard that indicated high **volatile organic compound** (**VOC**) soil vapor concentrations. The investigations identified three areas where the VOC concentrations in soil exceeded regulatory limits. The three areas were the Service Track, the South Turntable, and the Diesel Shop. These areas are shown on Figure 1.

Soil Vapor Extraction Pilot Test

In 1998 a **soil vapor extraction pilot study** was conducted at the Service Track area, South Turntable area and the Diesel Shop area. The pilot test consisted of using soil vapor extraction (SVE) to remove VOCs from soil. The results of the pilot study indicated that SVE could successfully remove VOCs from the soil.

Removal Action Goal

The goal of this removal action is to address a potential future threat to human health by reducing the concentrations of VOCs in soil. While there is currently no observable threat to human health, the contaminated soil will be remediated as early as possible to reduce the chance of VOCs migrating to the groundwater in the future. In addition, this removal action will reduce the chance of VOCs being released to the atmosphere.

Removal Action Selection Criteria

Removal action alternatives were evaluated based on: 1) effectiveness (how well they remove VOCs from soil; how well the public and environment would be protected during and after the removal action; and compliance with regulations); 2) implementability (considerations associated with the system construction and operation, potential disruption to railroad operations); and 3) cost.

Summary of Removal Action Alternatives

Four alternatives were ultimately selected for final review. They are summarized below.

Alternative 1: No Action

This alternative is typically used only to compare its effectiveness and potential cost against the other alternatives. Under this alternative, no remedial action would be taken to reduce the contamination in soil. The VOCs in soil would be left alone and would be reduced over several decades as a result of natural processes. This method would provide the least overall protection of human health and the environment. This alternative was not selected because the VOC concentrations in soil would remain above acceptable levels for many years.

Alternative 2: In-Situ Soil Flushing

This alternative consists of injecting a non-toxic, biodegradable, detergent-like solution into the ground where the soil is contaminated. As the solution moves through the soil, it flushes the VOCs from the soil. The solution containing VOCs is then pumped to a treatment unit above ground. The VOCs are removed from the solution. Lastly, the solution is combined with the wastewater generated at Taylor Yard and disposed of under the wastewater treatment permit.

This alternative was not selected because the technology is new and has not been widely used. The flushing process may not reach all contaminated areas, and identifying which areas had not been flushed would be difficult.

Alternative 3: Thermally-Enhanced Soil Vapor Extraction

This alternative consists of using hot air or steam to heat the contaminated soil. The heat or steam is injected into the ground beneath the contaminated soil. As the heat or steam rises, the VOCs evaporate, leaving the soil and going into the vapor. The vapor is drawn up to the

surface and passed through a thermal oxidizer. The thermal oxidizer burns the vapors, destroying the VOCs, and releases the clean vapor to the atmosphere.

This alternative was not selected because installation and operation of the system would disrupt railroad operations for a significant period of time. Additionally, heating the subsurface soils may damage the PCS.

Alternative 4: Soil Vapor Extraction

This alternative consists of removing VOCs by soil vapor extraction (SVE) and treating the vapor above ground to remove VOCs before releasing the vapor to the atmosphere. Three SVE systems would be used, one at each of the following areas: the Service Track Area, South Turntable, and Diesel Shop.

Each SVE system would be shut down once the VOCs have been reduced to the lowest level the SVE system can achieve. Operation of the SVEs is anticipated to continue for one to two years. Cleanup times in each of the three areas could vary depending on the level of contamination.

This alternative was selected because it is protective of human health and the environment; it would meet the goal of reducing the mass of VOCs in the soil; compared to the other alternatives it would not significantly disrupt railroad operations; it would meet regulatory requirements, and it has a reasonable cost.

Description of SVE System

Alternative 4 consists of treating the VOC-impacted soil by applying a vacuum to the soil to extract VOC-bearing vapors. The vapors would be treated above ground by **granular activated carbon** or a **catalytic oxidizer**.

The treatment systems will be mounted on a skid and will consist of a blower, vapor treatment equipment and piping. Figure 2 shows the SVE system.

The SVE systems in the Service Track and South Turntable areas will use granular activated carbon filters for the treatment of the soil vapor. As the vapor moves through the filters, the VOCs are removed and then the filtered air is released to the atmosphere.

Due to the higher levels of VOCs observed in soil in the Diesel Shop area, a catalytic oxidizer would be used instead of granular activated carbon filters. The catalytic oxidizer destroys VOCs by converting them to carbon dioxide and water, which are then released to the atmosphere. If the mobile systems can not remove VOCs in a short time, then a larger, semi-permanent system may be constructed.

The SVE systems will be monitored regularly to ensure that they continue to be effective, and that the air emissions meet the requirements of the South Coast Air Quality Management District, the agency that regulates air quality in Los Angeles.

All work will be conducted according to a Health and Safety Plan approved by DTSC, including the use of personal protective clothing and equipment as appropriate.

Effects of Clean-up on Local Area

Construction will be limited to laying piping for the SVE systems and is anticipated to last one to two weeks. The skid-mounted systems, supplies and equipment will all be delivered to the site during this time. While the SVE systems are operating, traffic associated with the SVE systems will consist of once-weekly pickup or utility truck trips. Therefore, the project will not significantly increase traffic entering Taylor Yard from San Fernando Road.

The SVE systems will be located near where locomotives are serviced and repaired. Noise generated from the SVE systems will not be louder than the background noise levels of the Active Yard in these areas. Therefore, operation of the SVE systems is not expected to significantly increase background noise levels. However, noise levels will be measured, and reasonable controls will be considered if noise levels exceed noise control regulations.

Schedule

Work is scheduled to begin in 1999, after the remedial action proposed for this project is approved by DTSC. The proposed remedial option will not be approved by DTSC until all comments received during the public comment period have been fully considered. It is anticipated that the SVE systems will operate for one to two years.

Future activities at Taylor Yard include completion of the Remedial Investigation/Feasibility Study and Risk Assessment for the Active Yard, as well as ongoing sitewide groundwater monitoring.

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GLOSSARY

Ballast – Granite or diorite cobbles used as shallow fill material beneath and in the area of railroad tracks.

Catalytic oxidizer – Equipment used to clean soil vapors. A heated vapor stream is passed through a precious metal filter. When the VOCs contact the filter they are converted into carbon dioxide and water.

Chloroethane - A volatile organic compound used as a solvent and in refrigeration.

Dichloroethane (1,1 DCA) - A volatile organic compound that can damage the nervous system. It is used as a solvent in the manufacture of vinyl chloride and as a gasoline additive.

Dichloroethene (1,1 DCE, cis 1,2 DCE) - A volatile organic compound commonly used as a solvent.

Granular activated carbon - A granular form of carbon, which has been treated to create a porous surface to allow for greater adsorption of VOCs.

Perchloroethylene (PCE) - A volatile organic compound that is used primarily as a dry-cleaning agent. It is often referred to as "perc." It is toxic and is listed as a cancer-causing chemical under Proposition 65.

Petroleum Hydrocarbons - A general term for gasoline, diesel, motor oils, and similar oils.

Pilot Study - A short test of a remedial method. Its purpose is to see if the method works in actual field conditions, and to collect information needed to customize the system for a particular site.

Removal Action - A remedial action performed that removes the source of the contamination. Removal actions typically do not require extensive equipment and construction, and can be completed in a relatively short time.

Trichloroethene (TCE) - A volatile organic compound often used as an industrial degreasing solvent. It is toxic and listed as a cancer-causing chemical under Proposition 65.

Vapor extraction system (VES) or soil vapor extraction (SVE) - A process by which chemical vapors are extracted from the soil using a high-powered vacuum applied to wells in the ground. The vapors are then cleaned by passing them through a filtering system.

Vinyl chloride - a volatile organic compound created by the chemical breakdown of PCE and TCE. It is toxic and is listed as a cancer-causing chemical under Proposition 65.

Volatile Organic Compounds (VOCs) - Carbon-based compounds that evaporate easily at temperatures normally found at ground surface and at shallow depths.

Wastewater - Water mixed with chemicals such as diesel gasoline, oil, and solvents produced during normal railroad operations. Wastewater is generated during washing and rinsing of locomotives and machinery.

More Information

The Public Participation Program will continue to be implemented for all other phases of remedial activities at Taylor Yard, and public involvement is strongly encouraged by DTSC. The public will be kept apprised of all new opportunities to provide input to DTSC's decision-making process.

For further information on public involvement opportunities, please call Ms. Holly Kress at (818) 551-2176.

Copies of project documents are available at the following repositories for review by interested persons:

The Office of Councilman Mike Hernandez
163 South Avenue 24, Room 202

Los Angeles, CA 90031
(213) 485-0763
8 am - 5 pm Mon - Fri

The Office of Assemblyman Antonio Villaraigosa
1910 W. Sunset Boulevard, Suite 500
Los Angeles, CA 90026
(213) 483-2730
8 am - 5 pm Mon - Fri

Cypress Park Library
3320 Pepper Avenue
Los Angeles, CA 90065
(213) 612-0460
12:30 pm - 8:00 pm Mon, Wed
10:00 am - 5:30 pm Tues, Sat
12:30 pm - 5:30 pm Thurs, Fri

DTSC Regional Office
1011 North Grandview Avenue
Glendale, CA 91201
(818) 551-2800
8 am - 5 pm Mon - Fri